

SOME CHALCID-WASPS REARED FROM CECIDOMYID GALLS.

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All except two of the species of Chalcidoidea described and listed in this paper are stated by the collectors, Mr. V. L. Wildermuth and Mr. E. G. Smyth, to have been reared from galls of the alfalfa gall-midge, *Asphondylia websteri* Felt. The two exceptions were reared from unidentified gall-making Cecidomyids, one being from a gall on *Pluchea borealis* and the other on *Suaeda* sp.

Of the species reared from galls of *Asphondylia websteri* the exact host relations of some are unknown. Some are undoubtedly primary parasites of the midge, while others are believed to be secondary upon that host. The clover seed-chalcid, *Bruchophagus funebris* Howard, was reared from some of the galls along with the parasites and it is possible that some of the parasites may have had this seed-chalcid for host. Mr. Wildermuth states that all specimens reared under Tempe Nos. 2223, 2224 and 2251 were reared from dissected *Asphondylia websteri* material and are therefore positively known to be either primary or secondary parasites of the midge. The material under Tempe No. 2264 was reared from collected galls of *Asphondylia websteri* placed in vials, and hence the host relations of this material can only be surmised. It was in the lot of material under this number that *Bruchophagus funebris* was found and it is probable as will be pointed out under discussion of the species that at least one species of parasite, *Tetrastichus bruchophagi*, came from this host.

Family EURYTOMIDÆ.

Eurytoma medicaginis new species.

Female. Length 2 mm. Head and thorax with strong umbilicate-punctate sculpture and thinly clothed with short silvery white hairs. Antennæ rather short; scape not reaching the front ocellus; pedicel conical, narrower and scarcely as long as the first funicle joint; ring-joint small; funicle five-jointed, the joints, except the first, subquadrate; the first joint slightly longer than broad, the fifth slightly broader than

long; club three-jointed, a little broader than the funicle, and not quite equal in length to the three preceding funicle joints combined, the basal joint subquadrate; second joint as long as the basal; third joint conical; ocelli in a very low triangle, the postocellar line more than twice the length of the ocellocular line; occiput immargined above, cheeks margined posteriorly; dorsal portion of pronotum very nearly as broad as the mesonotum and distinctly shorter than the mesoscutum; mesepisternum granularly rugulose, the mesepimeron indistinctly, longitudinally striate; propodeum very nearly perpendicular to the apex of scutellum, broadly but very shallowly impressed medially, the impressed area granularly rugulose; remainder of propodeum more coarsely rugose; marginal and postmarginal veins practically equal, the stigmal about three-fourths the marginal; abdominal petiole nearly twice as long as the hind coxæ, rather slender, flattened and nearly smooth above, longitudinally striate at sides and beneath, and joining the main part of abdomen ventrally, or, at least, at the antero-ventral angle; body of abdomen subglobose and ending in a short sharp point, strongly compressed from the sides, very strongly arched above the attachment of petiole as viewed from the sides, a little longer than the head and thorax combined and viewed laterally not one-third longer than thick dorso-ventrally; fifth segment the largest, approximately twice the length of fourth on the median dorsal line; ovipositor slightly exposed at tip; hind coxæ granularly rugulose like the middle of propodeum. Black; flagellum dark brown; scape brownish testaceous; coxæ and femora black; apices of femora and all tibiæ yellowish brown; all tarsi pale yellowish, claws brown; wings hyaline, venation brownish.

Male. Length 1.35 mm. Scape somewhat swollen beneath, reaching to the front ocellus; pedicel globose; between pedicel and first funicle one small ring-joint; funicle five-jointed, the joints, except the fifth, narrowed at apex into a distinct neck, each joint about twice as long as the thickened portion is thick and bearing hairs about twice as long as the length of segment; neck on apex of first segment shorter than on the other segments and the thickened portion longer; fifth segment not narrowed at apex, about twice as long as thick, with the hairs shorter than on the other segments; between each of joints two, three, four, and five of the funicle is what appears to be a very small transverse ring-joint, (visible only in balsam-mounted specimens); club two-jointed, the joints subequal in length, the apical joint ending in a very short inconspicuous nipple-like point; the propodeum is usually nearly uniformly reticulately rugose all over, the sculpture of the depressed area not markedly different from the rest of the surface; abdominal petiole longer than the hind coxæ, but not twice as long, slender, and weakly shagreened, not striate; body of abdomen small globose, hardly more than half as long as the thorax. Otherwise similar to the female, but with all tibiæ mostly blackish-brown.

Type locality, Tempe, Arizona. Type, Cat. No. 22295, U. S. Nat. Mus.

Host: *Asphondylia websteri* Felt.

Type, allotype and seven paratypes reared by V. L. Wildermuth from galls of the alfalfa midge and recorded under Webster No. 7268, Tempe No. 2251. Also a large series of specimens from the same host and locality reared by Wildermuth under Tempe No. 2264.

Antenna of type female on Hymenoptera Slide No. 781, and antennæ of a male and a female paratype on Hymenoptera Slide No. 782, U. S. Nat. Mus.

***Bruchophagus funebris* Howard.**

Specimens of this seed-chalcid were reared by Mr. Wildermuth from galls of *Asphondylia websteri* at Tempe, Arizona, under Tempe No. 2264. Its presence in these galls is undoubtedly accounted for by the fact that it not infrequently happens that developed seeds of alfalfa are present within the gall formed by the midge and these seeds afford opportunity for the development of the *Bruchophagus*.

Family CALLIMOMIDÆ.

***Callimome asphondyliæ*, new species.**

Female. Length 2.25 mm. Head and thorax shagreened above; face below antennæ less strongly sculptured than the vertex; antennæ rather short and thick; funicle seven-jointed, the funicle joints subequal in length, but increasing slightly in breadth toward the apex, and all joints broader than long, the first only slightly so, the last about half as long as thick; club three-jointed, not as long as the three preceding funicle joints; ocelli in a low triangle, the lateral ocellus separated from eye-margin by about the long diameter of the ocellus; parapsidal grooves complete, but weakly impressed posteriorly; propodeum without carinæ and uniformly shagreened, the sculpture not as strong as on scutellum; hind coxæ laterally sculptured like the scutellum; hind femora outwardly sculptured about like the propodeum; wings sparsely ciliated, the cilia more or less arranged in rows; stigmal vein very short, post-marginal also short; abdomen about equal to the thorax in length, the first tergite smooth, other tergites weakly sculptured, more strongly so at sides; ovipositor extending beyond the apex of abdomen about one and one-third times the length of abdomen. Color, dull blackish green, the head and thorax sparsely clothed with silvery white hairs; eyes pale reddish; face, propodeum, hind femora and the abdomen more strongly metallic than dorsum of thorax; sides of thorax and hind coxæ bluish; antennal scape and all tibiæ and tarsi brownish testaceous; flagellum, median and front femora, tarsal claws and ovipositor sheaths brownish black; wings hyaline; venation pale brownish.

Male. Length 2 mm. Tibiæ all dark brown. Otherwise agrees with the female except the general color is perhaps a little darker.

Type locality, Tempe, Arizona. Type, Cat. No. 22296, U. S. Nat. Mus.

Host, *Asphondylia websteri* Felt.

Six females and two males reared by V. L. Wildermuth from galls of the alfalfa midge under Webster No. 7268, Tempe No. 2251. May be a secondary parasite of *Asphondylia*, but is more likely primary.

***Syntomaspis medicaginis*, new species.**

Closely resembles *Syntomaspis thalassimus* Crosby, but differs by having the antennal scape pale testaceous, the face more deeply concave and more hairy, the mesoscutum and scutellum more deeply and closely sculptured and therefore less shining, the axillæ a little more widely separated and the tibiæ not so dark.

Female. Length 2 mm. Face more than ordinarily deeply concave, rather strongly sculptured and closely set with silvery hairs; lateral ocelli separated from the eye-margin by about the diameter of an ocellus or a little less; first joint of funicle a little broader than long, following joints decreasing gradually in length outwardly; club barely longer than the two preceding funicle joints; mesoscutum, axillæ and scutellum deeply, closely reticulate-punctate, subopaque; cross furrow on scutellum distinct, the surface behind the cross-furrow reticulately sculptured but not quite as deeply and finely so as the rest of scutellum; propodeum weakly reticulated, shining, with a few foveolate punctures on the anterior margin but without carinæ, the spiracles elliptical; discal ciliation of the forewing arranged in distinct rows and confined to the area distad of a line running obliquely basad from the stigmal vein to the posterior margin; the base of wing and a broad wedge-shaped area immediately beneath and extending the whole length of marginal vein entirely bare or with only a very few very weak cilia; in the apical portion of the wing a distinct row of cilia runs from the stigmal vein in a broad curve to the apical middle of wing; abdomen very slightly longer than the thorax, distinctly though not deeply reticulated, shining, the first tergite nearly smooth, tergites one to three emarginate at the middle; ovipositor exerted the length of thorax and abdomen. Head, thorax, abdomen, coxæ and all femora metallic green, thoracic pleura and the coxæ strongly tinged with purplish or blackish; antennal pedicel and flagellum brownish-black; antennal scape, all tibiæ and tarsi and the ovipositor brownish-testaceous; eyes pale reddish; wings hyaline, venation pale yellowish.

Male. Length 1.7 mm. Agrees with the female except that the scape is somewhat metallic, the dorsum of thorax is slightly more shining, the cross furrow on scutellum less distinct, the tibiæ except at apex are all blackish with more or less of a metallic lustre, and the abdomen is much shorter and smaller than the thorax.

Type locality, Tempe, Arizona. Type, Cat. No. 22297, U. S. Nat. Mus.

Host, *Asphondylia websteri* Felt.

Type female reared by V. L. Wildermuth from galls of the alfalfa midge and recorded under Webster No. 7268, Tempe No. 2264. One paratype with the same data except Tempe No. 2251. Allotype, four male paratypes and five female paratypes reared by E. G. Smyth at Tempe from the galls of the same insect and recorded under the same Webster number. Wing of a female paratype mounted on a slide.

***Syntomaspis umbilicata*, new species.**

In the sculpture of the thorax resembles *elegantissima* Ashmead, and *warreni* Cockerell, but is easily distinguished from both by the much shorter funicle joints, metallic colored femora and the smaller size.

Female. Length 2.5 mm. Head viewed from in front about as long as broad; face strongly sculptured with large shallow punctures; antennal depression deep and nearly smooth within, the antennæ separated at base by a carinate ridge; postocellar line equal to twice the ocellular line, the lateral ocelli not farther from the eye-margin than the diameter of an ocellus; antennal pedicel conical, about equal in length to the first funicle joint; ring-joint a little more than twice as broad as long; first funicle joint nearly quadrate, following joints diminishing very gradually in length, the last about two-thirds as long as broad; club three-jointed, not broader than the funicle and about as long as the three preceding funicle joints; pronotum rugulose; mesoscutum with large, closely placed umbilicate punctures; surface of the scutellum before the distinct cross-furrow sculptured like the mesoscutum, behind the cross-furrow finely reticulately sculptured; propodeum polished, without carinæ and with a row of large punctures along the anterior margin; ciliation of the forewing similar to that figured for *Syntomaspis medicaginis* (ante), but not so distinctly arranged in rows, the row running from stigmal vein to apex of wing present, but very poorly defined and the wedge-shaped hairless area behind the marginal vein somewhat more restricted, there being three or four coarse cilia basad of the stigmal vein in the apex of the wedge; hind coxæ about twice as long as thick with the dorso-posterior angle weakly carinately margined; abdomen about as long as the thorax; first, second, and third tergites emarginate medially, dorsally mostly polished; the second and third at sides, and the fourth entirely, distinctly reticulate; ovipositor exerted the length of the body; color of head and thorax above dull coppery green; propodeum polished metallic green; pleura, coxæ and all femora metallic greenish-black or bluish in some lights; first three tergites above steel-blue, sides of the abdomen and dorsum beyond the third tergite brassy-green; antennal pedicel and flagellum

brownish-black, more or less metallic; scape, all tibiae, and tarsi reddish testaceous; ovipositor sheaths black; wings hyaline, venation pale yellowish.

Male. Length 2 mm. Antennal pedicel a little shorter than the first funicle joint; first funicle joint slightly broader than long and not longer than the second; joints beyond the second very slightly diminishing in length; sculpture of scutellum like that of female but the cross-furrow not distinctly impressed; propodeum faintly rugulose with a very weak median carina; abdomen a little shorter than the thorax, the tergites not distinctly emarginate medially; scape dark above, reddish testaceous beneath; all tibiae brownish-black; tarsi pale yellowish. Otherwise like the female.

Type locality, Tempe, Arizona. Type, Cat. No. 22298, U. S. Nat. Mus.

Female type, male allotype and two male paratypes reared by Mr. V. L. Wildermuth from galls of a Cecidomyiid on *Suaeda* species and recorded under Tempe No. 2741.

Family PTEROMALIDÆ.

Pseudocatolaccus americanus, new species.

This species is apparently very similar to *Pseudocatolaccus asphondylia* Masi, Boll. Lab. Zool. Agr., Portici, 3, 1908, p. 139 (—*Pteromalus polyphagus* Foerster, according to Kurdjumov, Rev. Russe d'Entom. 13, 1913, p. 7) differing principally from the description of that species in its smaller size, somewhat shorter malar space, slightly shorter antennal joints and the more acute second and third teeth of the mandibles.

Female. Length 2.5 mm. Head and thorax strongly reticulate-punctate, the sculpture of mesonotum somewhat stronger than that of the head. Head fully four times as broad as long, as viewed from above; ocelli in a low triangle, postocellar line a little shorter than the ocellocular line; as viewed from in front the head is distinctly broader than long, antennae inserted above the lower extremity of eyes, malar space shorter than the height of eye, clypeus irregularly striate, its anterior margin sinuate; cheeks at base of mandibles distinctly concave; mandibles four-toothed, the outer tooth acute, two median teeth subacute, inner tooth blunt at apex; antennal scape cylindrical and not reaching the anterior ocellus; pedicel conical and longer than thick; three ring-joints strongly transverse, about equal in length but increasing in breadth from first to third; funicle five-jointed, the first joint about one-third longer than broad, following joints decreasing slightly in length, the fifth subquadrate or very slightly broader than long; club slightly thicker than the funicle, three-jointed, and about twice as long as the fifth funicle joint; mesoscutum much broader than long, the parapsidal grooves weakly impressed on the anterior half; scutellum

as long or a little longer than the mesoscutum; propodeum short, mostly sculptureless with a weak median carina and strong lateral folds, the spiracles elliptical and close to the anterior margin of propodeum; wings hyaline, the area before the submarginal vein with a few cilia apically; behind the submarginal bare; ciliation of the rest of wing rather sparse; stigmal and postmarginal veins subequal and each about four-fifths the length of marginal; abdomen about as long as head and thorax, conic-ovate and somewhat narrower than the thorax. Head and thorax aeneous, scape pale testaceous; flagellum dark brown; mandibles brownish; coxæ concolorous with the thorax; all femora brownish-black; all tibiæ brownish except at apex which is pale yellowish like the tarsi; apical joint of all tarsi dark; abdomen metallic blue-green at base, bronzy black beyond.

Male. Length 2 mm. Scape reaching the front ocellus, antennæ with two ring-joints and a six-jointed funicle, the funicle joints subequal and slightly longer than broad; ocellocular and postocellar lines about equal; abdomen not as long as the head and thorax; color of head and thorax metallic blue-green; all femora dark brown; all tibiæ and tarsi pale yellowish, the apical tarsal joint dark; otherwise like the female.

Type locality, Tempe, Arizona. Type, Cat. No. 22299, U. S. Nat. Mus.

Host, *Asphondylia websteri* Felt.

Described from eight females and one male reared by V. L. Wildermuth from the alfalfa midge under Webster No. 7268, Tempe No. 2251. Also one female and one male from the same locality and host reared by Mr. Wildermuth under Tempe No. 2224.

Mouthparts and antenna of a female paratype mounted on a slide (Hymenoptera Slide No. 783, U. S. Nat. Mus.) Other type material mounted on card points.

This species, according to Mr. Wildermuth, is known to be a true parasite of *Asphondylia websteri* Felt.

***Trimeromicrus maculatus* Gahan.**

One specimen of this species, reared under Tempe No. 2223 is, according to Mr. Wildermuth, known to have been a true secondary parasite of *Asphondylia websteri*, having been dissected out of that host and then reared to maturity. Other specimens of the species were reared under Tempe No. 2264 from galls of *Asphondylia websteri* along with a number of other hymenopterous parasites and including several specimens of *Bruchophagus funebris*.

Trimeromicrus maculatus was originally recorded as a parasite in alfalfa seed-pods infested with *Bruchophagus funebris*, and subsequently proven by Mr. T. D. Urbahns to be a primary parasite upon that host. The record under Tempe No. 2223 is interesting as showing that this species may develop upon parasitic forms of Hymenoptera as well as upon the plant-feeding *Bruchophagus funebris*. In the case of the record under Tempe No. 2264 it is impossible to say whether the specimens of this species were parasitic upon *Bruchophagus*, which was shown to be present in the *Asphondylia* galls, or whether it was actually present in its role of a secondary parasite of *Asphondylia*.

Family EULOPHIDÆ.

Tetrastichus sobrius, new species.

Female. Length 1.8 mm. Face reticulately shagreened, with two longitudinal rows of shallow punctures between the antenna and eye-margin; antennal pedicel slightly shorter than the first funicle joint; first funicle joint the longest, joint two very slightly longer than three, joint three one and one-half times as long as broad and approximately three-fifths the length of the first; club short, pointed ovate, obscurely three-jointed, the first suture distinct but shallow, the second suture subobsolete; thorax finely lineolated above, the mesoscutum with a distinct complete median groove, scutellum without a median groove, but with the dorso-lateral grooves complete and distinct; propodeum very short, without any carinæ and very faintly reticulately sculptured, nearly smooth; mesopleura practically smooth, the prepectus distinctly shagreened; basal joint of hind tarsi a little shorter or no longer than the second joint; submarginal vein of the forewing with at least four or five bristles above; abdomen about one and two-thirds times as long as head and thorax, as broad as the thorax and pointed at apex, the tergites very faintly sculptured. Head, thorax, abdomen, and all femora brownish-black; flagellum brownish; scape, pedicel, all tibiæ and tarsi pale testaceous; an obscure transverse spot in front of the anterior ocellus, also, pale; metanotum medially, more or less testaceous; wings hyaline, the venation testaceous.

Male. Length 1.3 mm. Scape of antenna a little thicker than the pedicel and about twice as long; pedicel conical, a little longer than thick; ring-joints very small, the number not discernible; funicle four-jointed, the first joint as broad as long, somewhat shorter and broader than the pedicel, second about one and two-thirds the length of the first; third and fourth joints equal and each a little longer than the second; club plainly three-jointed, about as long as the two preceding funicle joints combined, the apical joint produced at apex into a sharp point; each of the four funicle joints with a half-whorl of hairs above

near the base, the hairs three to four times as long as the joint bearing them; basal joint of club with a half-whorl of similar long hairs above near middle of joint and another half-whorl beneath and a little more basad; abdomen not longer than the head and thorax, narrower than the thorax and not pointed at apex. Antennæ entirely pale testaceous; abdomen with a large pale, nearly white spot at base above. Other characters as in the female.

Type locality, Tempe, Arizona. Type, Cat. No. 22300, U. S. Nat. Mus.

Three specimens, one female and two males, reared by Mr. Wildermuth from galls of the alfalfa gall midge, *Asphondylia websteri* Felt, under Webster No. 7268, Tempe No. 2264. Also two females and two males reared by E. G. Smyth from the same source. Antenna of female paratype and male allotype on a slide.

The host relations of this species are unknown to the writer. It may be either a primary or secondary parasite of *Asphondylia* or it may possibly have been parasitic upon *Bruchophagus funebris*, specimens of which were reared from the same lot of galls.

Tetrastichus bruchophagi Gahan.

Specimens of this species were received from Mr. Wildermuth under Tempe No. 2264, having been reared together with several other species of Hymenoptera, including *Bruchophagus funebris*, from galls of *Asphondylia websteri* Felt, collected in the field and placed in vials for rearing parasites. The species is known to be a primary parasite of *Bruchophagus funebris* and may have been present in the *Asphondylia* gall in this role. On the other hand, it is not unlikely that this species, like *Trimeromicrus maculatus*, may have developed as a secondary parasite of *Asphondylia* using some one of the primary parasites of the Cecidomyid as host.

Paragaleospomyia gallicola, new species.

It is very close to *P. eja* Girault, but differs in having the abdomen more slender, and the hind tibiae black only on the apical half.

Female. Length 2 mm. Head, viewed from in front, slightly broader than long, the ventral margin nearly straight, cheeks slightly convex in profile; antennal depression deep and broad with a shallow subquadrate extension below the base of antennæ; ocelli in an obtuse triangle, the postocellar line about twice the ocellocular; face and cheeks

finely and weakly reticulated, the frons and vertex with similar but stronger sculpture; antennæ separated at base by a distance about equal to that between the base of antenna and the eye margin; scape slender, flattened outwardly; pedicel three times as long as thick, about equal in length to the first funicle joint and the ring-joints combined; four distinct, transverse, ring-joints; funicle three-jointed, the first joint the longest and about twice as long as thick; second joint distinctly, though not a great deal longer than broad and a little longer than the third; third joint subquadrate; club solid, and very slightly longer than the two preceding funicle joints combined; pronotum and mesoscutum strongly shagreened, parapsidal grooves deep, praescutum without trace of a median groove; scutellum more weakly sculptured than the mesoscutum, lineolate-reticulate with the paired dorsal grooves distinct, but without a median groove; propodeum rather long, distinctly, though not deeply, reticulate-punctate, slightly shining, with a distinct median carina; mesepisternum and prepectus sculptured like the mesoscutum; mesepimeron mostly polished, its dorso-posterior margin reticulated; hind coxæ strongly reticulate-punctate; abdomen as long as the head and thorax, slightly narrower than the thorax, pointed at apex, the first and basal half of second tergites polished, the apical half of second and the following tergites distinctly reticulate-punctate; second tergite a little shorter than the first; third and fourth large, subequal, and each about as long as the first. Black; flagellum brownish testaceous; scape, anterior tibiæ, basal half and narrow apical portion of median and hind tibiæ testaceous; all tarsi pale yellowish, the apical joint black; wings hyaline, venation testaceous.

Male. Length 1.25 mm. Antennal scape with a slight keel-like expansion on apical half beneath; three transverse ring-joints; funicle four-jointed, the first joint small and subquadrate or very slightly broader than long, second joint one and one-half times as long as broad, third very slightly longer than broad, the fourth quadrate; club solid, nearly as long as the three preceding funicle joints and distinctly thicker than the funicle; abdomen subpetiolate, about as long as the thorax, the first tergite a little longer than the second, smooth; second and third tergites sculptured, the third about twice as long as the second, tergites beyond the third very short. Scape black, flagellum testaceous. Otherwise like the female.

Type locality, Tempe, Arizona. Type, Cat. No. 22301, U. S. Nat. Mus.

Two females and six males reared by V. L. Wildermuth from Cecidomyid stem-galls on *Pluchea borealis* and recorded under Tempe No. 2742.

***Galeopsomopsis transcarinatus*, new species.**

Very similar to *G. multisulcatus* Girault, but may be distinguished by the fact that the first funicle joint is the longest of the funicle joints, the true metanotum is smaller, not quite so strongly sculptured, with the

median carina less strongly developed, the submarginal vein has four to six erect hairs above instead of two, and the propodeum is slightly different.

Female. Length 2 mm. Antennal pedicel conical, a little shorter than the first funicle joint; ring-joints transverse and apparently three in number; first joint of funicle slightly longer than the second and fully twice as long as thick, second a little longer than the third, the latter ovoid and not one and one-half times as long as broad; club not quite as long as two preceding joints, ovate, distinctly three-jointed and terminating in a short spine, the joints subequal in length, but joints two and three narrowing rapidly toward apex; antennal depression deep and triangular; malar furrow basally represented by a deep rounded fovea; ocelli large, the lateral ocellus separated from the eye margin by distinctly less than the long diameter of an ocellus; a deep groove runs anteriorly from each lateral ocellus, the two grooves converging in front of the anterior ocellus; face laterad of the antennal depression and the vertex strongly sculptured; mesoscutum and scutellum lineolately sculptured; praescutum with a faintly indicated non-impressed median line, and two or three rows of pimple-like rugosities along the margins of parapsidal grooves; scutellum apparently with only an apical pair of bristles; grooves of the scutellum not deeply impressed, the sublateral pair with a few pimple-like rugosities similar to those of praescutum; metanotum faintly sculptured with an indistinct median carina; propodeum strongly sculptured all over, with a distinct median longitudinal carina and a strong transverse carina, which is more or less interrupted medially; the surface in front of the transverse carina shagreened; behind the transverse carina also shagreened but divided by several more or less distinct longitudinal carinae; marginal vein longer than the submarginal, the stigmal about one-third the marginal and scarcely at all thickened at apex; abdomen subsessile, conic-ovate, and strongly shagreened above. Color metallic blue-green; wings hyaline; antennae, tegulae, wing veins and the legs for the most part pale testaceous; all coxae concolorous with the thorax, all femora; except apically, blackish brown.

Male. Length 1.6 mm. Scape very slightly expanded beneath on apical two-thirds; apparently but one ring-joint, and this very obscure; funicle five-jointed, the first funicle joint very slightly shorter than the pedicel and a little longer than broad; second joint about one and one-half times the first; third and fourth joints subequal and twice as long as the first; fifth funicle joint longer than the first, but shorter than the second; all funicle joints narrower at apex than base, and bearing near base above a half-whorl of hairs approximately twice as long as the joints; the fifth joint has in addition a half-whorl beneath and nearer the base than the dorsal whorl which is located near the middle of segment; club two-jointed, slender, the joints subequal in length, the apical one tapering to a sharp point at apex; the basal joint of club is provided with a whorl of long hairs which are not as long as those of the funicle joints; ocelli large and narrowly separated from the eye

margin; propodeum with the transverse carina weak, especially medially; abdomen not longer than the thorax, parallel-sided or nearly, not depressed above and much narrower than the thorax. Otherwise like the female.

Type locality, Tempe, Arizona. Type, Cat. No. 22303, U. S. Nat. Mus.

Host, *Asphondylia websteri* Felt.

Type, allotype and six paratypes reared by Mr. V. L. Wildermuth from galls of the alfalfa midge and recorded under Webster No. 7268, Tempe No. 2251. Also ten specimens with the same data under Tempe No. 2264. All specimens on card points; antennæ from a female and a male paratype mounted on a slide.

Whether the species is a primary or secondary parasite of *Asphondylia* the writer is unable to state.